REMARKS

This communication responds to the Office Action mailed on October 7, 2008.

Claims 1-5, 8, 12, 17-22, 27, 30-34 and 37-40 are amended, no claims are canceled, and claims 41-44 are added; as a result, claims 1-44 are now pending in this application.

§103 Rejection of the Claims

Claims 1-40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Hughes et al. (U.S. Patent No. 6,427,193: hereinafter "Hughes") in view of Sachs et al. (U.S. Publication No. 2002/0009067: hereinafter "Sachs"). In view of the amended independent claims, this rejection is respectfully traversed.

Independent claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38 have been amended to more clearly distinguish the claimed subject matter from Hughes or Sachs, alone or in combination. For example, amended claim 1 is directed to:

> *a load/store unit that includes a retry logic that is to retry access to a* ***memory*** *resource* ***operatively coupled to the apparatus*** *after receipt of a negative acknowledgment for an attempt to access the* ***memory*** *resource by the load/store unit; and*
>
> *a congestion detection logic to output a signal that indicates that the* ***memory*** *resource is congested based on receipt of a consecutive number of negative acknowledgments in response to access requests to the* ***memory*** *resource.*

These features are similarly recited in each of the other amended independent claims and are fully supported in the Application as originally filed on July 31, 2003. *See e.g.* the Application, FIG. 1; p. 15, line 24 through p. 16, line 6; and p. 19, lines 4-17. Thus, no new matter has been added.

The Office states that "[although] Hughes et al. fails to disclose the congestion detection logic of claim 1[,] Sachs teaches a congestion detection logic to output a signal that indicates that the [memory] resource is congested based on receipt of a consecutive number of negative acknowledgments in response to access requests to the [memory] resource, **in paragraphs 45 and 52, wherein the second negative acknowledgment indicates that the [memory] resource is congested.**" (Emphasis added.) *See e.g.* the Office Action, p. 3, lines 4-8. The Office seems to assert that Sachs' use of a negative acknowledgment is equivalent to Applicants' congestion

detection logic as claimed in amended claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38. The statements and assertions made in the Office Action are respectfully traversed.

It is respectfully submitted that Sachs is directed to a different technical problem from the claimed subject matter and does not show each and every limitation of each of amended claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38. Sachs relates to controlling data transmission between a user equipment (UE) (e.g., mobile phone or personal digital assistant (PDA)) and a network node (e.g., radio base station) based on multi-layered protocols. *See e.g.* Sachs, paragraphs [0028], [0038] and [0044]. In particular, the portions of Sachs cited by the Office state that:

> [0045] FIG. 4 shows the corresponding flow chart for **the transmission control procedure in the MAC protocol as described in detail in 3G TS 25.321**. After configuration 40, **checks 41 are performed by the MAC protocol whether data packets are ready for transmission**. If this is the case, a scheduling according to the priority of the data packets is performed in step 42. Furthermore, **a** variable access back-off delay is enabled by assigning a constant P.sub.i to data packets or groups of data packets i in step 43. **A loop 44 is entered which delays the channel access for a random time to avoid access collisions**. To accomplish a statistical distribution of accesses, a random number is calculated and compared to the constant P.sub.i attributed to a data packet or group of data packets. Loop 44 which corresponds to the initial back-off time is ended when the random number is smaller than or equal to constant P.sub.i while else a further random draw is performed after a waiting period. By transmitting a message to initiate an update 45 to change allowed ranges for the constant P.sub.i, **the network is able to control the load on the random access channel**.
>
> [0052] **When an access attempt [to the random access channel (RACH)] during the access attempt delay 65 is successful as detected in check 70, the transmission 74 of the data on a physical [network] channel is performed [between the user equipment (UE) and the radio base station (BS)]. If the result of check 70 is that a channel access attempt has failed, the protocol falls back into a subsequent back-off delay 66, 68**. In FIG. 5, the protocol distinguishes different reasons for a failed attempt in further check 71 and the duration of the subsequent back-off delay 66, 68 depends on the reason for the unsuccessful channel access. **When the user equipment does not receive an acknowledgement from the network confirming a successful channel access**, the subsequent access is delayed by a certain amount of time as indicated by "Subsequent Backoff Delay 1" 66. **If a negative acknowledgment as an indication of congestion is returned from the network**, the user equipment uses a longer "Subsequent Backoff Delay 2" 68 **to ease the load on the [random access] channel**. Additional reasons corresponding to further subsequent back-off branches are possible. (Emphasis added.)

As quoted above, Sachs shows that the data transmission request between the user equipment (UE) and the radio base station (BS) is performed only when an access attempt to a channel (e.g.,

random access channel (RACH)) is successful. If the access attempt to the channel is not successful, a subsequent access attempt to the channel is delayed for a certain amount of time. Depending on the reason for which the access attempt to the channel is not successful, the amount of delay time varies. If the user equipment does not receive an acknowledgment from the network which confirms a successful channel access, the subsequent access attempt is delayed for a shorter amount of time (e.g., "Subsequent Backoff Delay 1"). If the user equipment receives a negative acknowledgment from the network, this indicates congestion in accesses to the channel. Thus, the subsequent access attempt is delayed for a longer amount of time (e.g., "Subsequent Backoff Delay 2"). Although Sachs describes a method of adapting to congestion between the user equipment and the radio base station, there is no indication in Sachs or in any of the cited documents that the negative acknowledgment could be used to show congestion in accesses to a memory resource. In fact, as noted above, this is a very different problem than is solved by Sachs.

A further reading of Sachs discloses that "an initial back-off delay 64 spreads random access attempts in time to minimize **the collision probability during the channel access phase when more than one user equipment use the same random access channel.**" *See id.* at paragraph [0051]; *see also id.* at paragraphs [0005] and [0047]. That is, under Sachs' approach, the negative acknowledgment is a sign of collision in access attempts to the random access channel (i.e., physical layer of communication protocols). That being the case, the negative acknowledgment is generated in response to the access attempts to the random access channel. This makes sense because Sachs is not concerned about how a processor in the user equipment or the radio base station accesses its associated memory resources. Furthermore, even assuming that the collision detection in the access channel in Sachs is analogous to the congestion detection in the memory resource in amended claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38, Sachs determines the "indication of congestion" based upon a single negative acknowledgment, rather than a series of negative acknowledgments.

In contrast, as cited above, amended claim 1 recites "a congestion detection logic to output **a signal that indicates that the memory resource [operatively coupled to the apparatus] is congested** based on receipt of **a consecutive number of negative acknowledgments** in response to **access requests to the memory resource**." Nowhere are any

such teachings found within the bounds of Hughes or Sachs, alone or in combination. Similar arguments are applicable to amended claims 5, 8, 12, 17, 22, 27, 31, 34 and 38.

For at least the reasons stated above, it is respectfully submitted that the Office fails to show a prima facie case of obviousness. Reconsideration and allowance of amended claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38 are respectfully requested. Claims 2-4, 6, 7, 9-11, 13-16, 18-21, 23-26, 28-30, 32, 33, 35-37, 39 and 40 are allowable as being dependent on one of corresponding amended claims 1, 5, 8, 12, 17, 22, 27, 31, 34 and 38 which are believed to be allowable.

New Claims

Claims 41-44 have been newly added. The feature of the new claims is fully supported in the Application as originally filed on July 31, 2003. *See e.g.* the Application, p. 19, lines 11-13; and p. 43, lines 19-22. Thus, no new matter has been added. Claims 41-44 are allowable as being dependent on one of corresponding amended claims 1, 17, 31 and 38 which are believed to be allowable. Allowance of new claims 41-44 is respectfully requested.

CONCLUSION

It is respectfully submitted that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (612) 373-6909 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on April 7, 2009.

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